

ADDITIONS TO THE GENUS *STREPTAXIS*.

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PLATE XII.

SINCE my synopsis of the genus *Streptaxis* appeared¹ additional material has reached me from various sources. Amongst it are some apparently new species, descriptions of which are now given. I am enabled also to illustrate two hitherto unfigured species and to supply a few bibliographical items which were omitted from the former paper.

1. *STREPTAXIS DA-COSTÆ*, n.sp. Pl. XII, Figs. 5-7.

Shell imperforate, solid, whitish corneous, subpellucid, conoid, strongly ribbed above, the interstices showing microscopic spiral striation, smooth and polished below; slightly excavated round the umbilicus. Spire convex, suture impressed, apex obtuse. Whorls 6 $\frac{3}{4}$, rapidly increasing, somewhat flattened at the sides, tumid below, the last dilated towards the aperture, shortly and slowly descending in front. Aperture oblique, semi ovate, the margins subparallel. Peristome thickened and shortly reflected; outer margin slightly receding above, columellar margin ascending, dilated, completely closing the umbilicus. A thin callus covering the parietal wall, which shows two or three varices. Alt. 14 mm.; diam. maj 15, min. 13.5 mm.

Hab.—Cauca, New Grenada. Four specimens.

Type in Mr. Da Costa's collection.

The new species resembles *S. Funcki*, Pfr., but is much smaller, the axis is more oblique, the columellar margin more ascending, the aperture narrower, and the spire more elevated. Two of the specimens are immature, showing the deep open umbilicus.

2. *STREPTAXIS THEBAWI*, Godwin-Austen. Pl. XII, Figs. 11-13.

This species has hitherto not been illustrated. Mr. Ponsonby, who possesses the type, has kindly allowed me to give a figure of it.

3. *STREPTAXIS PORRECTUS*, Pfeiffer. Pl. XII, Figs. 20-22.

This species also has remained unfigured. The shell drawn has been compared with the types in the British Museum, and it agrees with them in every respect, except that it is a trifle smaller. This specimen and one other were received from Mr. Hermann Rolle, with the habitat Laos. Alt. 7.75, diam. 6 mm.

4. *STREPTAXIS PRESTONI*, n.sp. Pl. XII, Figs. 17-19.

Shell narrowly deeply umbilicated, subcylindrical, whitish corneous, smooth and shining, finely costulate at the sides, the costulæ becoming

¹ *Ante*, p. 201.

very strong at the sutures, giving the latter a crenulated appearance, especially at the last whorl. Spire elevated, suture impressed, apex obtuse. Whorls 7, the earlier ones convex, the last two somewhat compressed laterally, the last not descending in front, slightly constricted behind the peristome, keeled round the umbilicus. Aperture oblique, subelliptic. Peristome strongly thickened and reflexed; margins subparallel, the outer receding a little above, bearing on the inner side a strong tubercle; basal margin curved, columellar margin straight, a little dilated above, overhanging the umbilicus. The parietal wall bears a compressed entering fold close to the upper margin of the peristome, and is connected with it by a slightly raised ridge. Alt. 10·75, diam. 8·5 mm.

Hab.—Lampun, Siam. Two specimens.

Type in my collection.

Compared with its nearest ally, *S. porrectus*, Pfr., the new species is larger and more solid, the costulae at the suture are much more conspicuous, the umbilicus is wider and deeper, the aperture more elongated, and the peristome thicker. The right margin of the peristome, moreover, bears a strong tubercle, and the parietal fold is more prominent and elevated. The shells were received from Mr. Preston.

5. *STREPTAXIS OBTUSUS*, Stoliczka. Pl. XII, Figs. 8–10.

The specimen now figured was received from Colonel Beddome with the manuscript name *S. guttulinus*, and at first I was inclined to regard it as a new species. Mr. Blanford, however, obligingly allowed me to inspect specimens of *S. obtusus*, received from Stoliczka himself, and comparison with these proved beyond doubt that the shell pertained to Stoliczka's species.

Hab.—Moulmain, Burma.

6. *STREPTAXIS LATIOR*, n.sp. Pl. XII, Figs. 1–4.

Shell umbilicate, depressed-conoid, whitish corneous, finely costulate above, smooth and shining below. Spire depressed, suture channelled, apex obtuse. Whorls 6, the earlier ones flattened, the penultimate angular, projecting above the last, which is inflated below, not descending in front, angular round the umbilicus. Aperture oblique, subrhomboid. Peristome thickened and shortly reflected; margins distant. Parietal wall with an entering elevated fold about the middle, and a second short oblique fold a little above it. Outer margin receding a little above, inflected about the middle. The inside of the peristome bears three equal equidistant tubercles, one each on the outer, basal, and columellar margins; behind the peristome occurs a shallow serobiculation corresponding with the basal tubercle. Umbilicus moderately deep, narrow at first, suddenly widening, strongly costulate within. Alt. 6 mm.; diam. maj. 8, min. 6·25 mm.

Hab.—Nilgiris, India.

Type in my collection.

Colonel Beddome kindly furnished a specimen from a suite of several in his collection, which were labelled *S. Peroteti*. The present shell differs from that species in the much wider umbilicus and the wider

aperture. The peristome is more reflected, and the tubercle on the basal margin, which in *S. Peroteti* is entering, here is parallel with the peristome; the costulae are also coarser, and the shell is broader. Fig. 4 shows the aperture enlarged two diameters.

7. *STREPTAXIS PLEUROSOMOIDES*, n.sp. Pl. XII, Figs. 14-16.

Shell narrowly umbilicated, sub-ovate, whitish corneous, smooth, shining. Spire depressed, suture channelled, apex obtuse. Whorls $5\frac{1}{2}$, rounded, the last scarcely descending in front, slightly constricted behind the peristome, angulated round the umbilicus. Aperture oblique, subtriangular. Peristome thickened and reflexed; margins distant, connected by a ridge on the parietal wall, which bears about the middle an entering, elevated, gradually descending, curved fold. The latter is connected with the outer margin of the peristome by a slightly raised ridge on the parietal wall. Outer margin receding above, inflected about the middle, where it bears a short entering fold and immediately above it a slight tubercle; the basal and columellar bear three small, equal, equidistant teeth. Alt. 4.5 mm.; diam. maj. 6.5, min. 5 mm.

Hab.—Courtallum Hills, Tinnevely, India.

Type in my collection.

This species is allied to *S. Watsoni* and *S. Beddomei*, but is larger than either. From the former it further differs in the more preponderating last whorl, which is also more dilated at the mouth; the aperture is different in shape, and lacks the upper parietal and upper marginal teeth, while the basal and columellar margins bear three equal, equidistant teeth in place of the two basal ones in *S. Watsoni*; these teeth, moreover, are quite different in character in the two species. In the shape, the aperture, and the number and disposition of the teeth, *S. pleurosomoides* closely resembles *S. Beddomei*, and I was at first inclined to regard it as pertaining to var. *major* of that species; but the absence of the strong costulae in the umbilicus, so characteristic of *S. Beddomei*, and, what is perhaps of more importance, the total lack of the conspicuous serobiculation behind the peristome, appear to me on fuller consideration to be sufficient to give the present form undoubted specific rank. The shell was received from Colonel Beddome, who kindly placed it at my disposal for description. It was accompanied by the manuscript name which I have adopted.

ADDITIONS TO THE SYNOPSIS.

STREPTAXIS, Gray.

(*Ante*, p. 204.)

Section I. *EUSTREPTAXIS*, Pfeiffer.

Subsection 1. *Edentulae*, Pfeiffer.

10. *STREPTAXIS DUNKERI*, Pfeiffer.

Streptaxis Dunkeri, Pfr.: Hidalgo, Obras Malac., pt. iii (1893), p. 86, No. 46.

Streptaxis (Eustreptaxis) Dunkeri, Hidalgo: ib., p. 128.

11*. *STREPTAXIS DA-COSTÆ*, n.sp.

Streptaxis Da-Costæ, Gude : *ante*, p. 322, Pl. XII, Figs. 5-7.

Hab.—New Grenada : Cauca.

13. *STREPTAXIS CONTUSUS*, Fér.

Streptaxis contusus, Fér. : Hidalgo, *Obras Malac.*, pt. iii (1893), p. 87, No. 47.

Streptaxis (Eustreptaxis) contusus, Hidalgo : *ib.*, pp. 128 and 141.

14. *STREPTAXIS UBERIFORMIS*, Pfeiffer.

Streptaxis uberiformis, Pfr. : Hidalgo, *Obras Malac.*, pt. iii (1893), p. 87, No. 48.

Streptaxis (Eustreptaxis) uberiformis, Hidalgo : *ib.*, p. 128.

16. *STREPTAXIS DESHAYESIANUS*, Crosse.

Streptaxis Deshayesianus, Crosse : Hidalgo, *Obras Malac.*, pt. iii (1893), p. 87, No. 51.

Streptaxis (Eustreptaxis) Deshayesianus, Hidalgo : *ib.*, pp. 128 and 142.

27. *STREPTAXIS MICANS*, Putzeys.

Streptaxis micans, Putz. : Bull. Séances Soc. Roy. Malac. Belg., vol. xxxvi (1901), p. xli, fig. 14.

Subsection 2. *Dente parietali munitæ.*

(*Ante*, p. 211.)

44. *STREPTAXIS THEBAWI*, Godwin-Austen.

Streptaxis Thebawi, G.-A. : Gude, *ante*, p. 322, Pl. XII, Figs. 11-13.

71. *STREPTAXIS PORRECTUS*, Pfeiffer.

Streptaxis porrectus, Pfr. : var., W. T. Blanford, *Proc. Malac. Soc.*, vol. v (1903), p. 275.

Hab.—Siam : Lampun.

Streptaxis porrectus, Pfr. : Gude, *ante*, p. 322, Pl. XII, Figs. 20-22.

Hab.—Siam : Laos.

71*. *STREPTAXIS PRESTONI*, n.sp.

Streptaxis Prestonii, Gude : *ante*, p. 322, Pl. XII, Figs. 17-19.

Hab.—Siam : Lampun.

Subsection 3. *Odontartemon*, Pfeiffer.

(*Ante*, p. 218.)

77. *STREPTAXIS BURMANICUS*, W. T. Blanford.

Streptaxis Burmanica, Hanley & Theob. : *Conch. Ind.*, pl. clvi, fig. 10.

83. *STREPTAXIS OBTUSUS*, Stoliczka.

Streptaxis obtusus, Gude : *ante*, p. 323, Pl. XII, Figs. 8-10.

Hab.—Burma : Moulmain.

88. *STREPTAXIS PEROTETI*, Petit.

Streptaxis Perroteti, Cooke : *Camb. Nat. Hist.*, vol. iii, *Mollusca* (1895), p. 302, fig. 203.

88*. STREPTAXIS LATIOR, Gude.

Streptaxis latior, Gude : *ante*, p. 323, Pl. XII, Figs. 1-4.
Hab.—Nilgiris, India.

94*. STREPTAXIS PLEUROSTOMOIDES, n sp.

Streptaxis pleurostomoides, Gude : *ante*, p. 324, Pl. XII, Figs. 14-16.
Hab.—Courtallum Hills, Tinnevely, India.

Section II. DISCARTEMON, Pfeiffer.

(*Ante*, p. 226.)

131. STREPTAXIS CROSSEI, Pfeiffer.

Streptaxis Crossei, Pfr. : Hidalgo, Obras Malac., pt. iii (1893), p. 87,
 No. 50.
Streptaxis (Discartemon) Crossei, Hidalgo : *ib.*, pp. 128 and 139.

Section III. ARTEMON, Beck.

(*Ante*, p. 227.)

135. STREPTAXIS CANDIDUS, Spix.

Streptaxis candidus, Spix : Hidalgo, Obras Malac., pt. iii (1893), p. 88,
 No. 52.
Streptaxis (Artemon) candidus, Hidalgo : *ib.*, pp. 128 and 134.

149. STREPTAXIS PAIVANUS, Pfeiffer.

Streptaxis Paivanus, Pfr. : Hidalgo, Obras Malac., pt. iii (1893), p. 87,
 No. 49.
Streptaxis (Artemon) Paivanus, Hidalgo : *ib.*, pp. 128 and 135.

Section VIII. MICRARTEMON, Möllendorff.

(*Ante*, p. 232.)

163. STREPTAXIS BOETTGERI, Möllendorff.

Streptaxis Boettgeri, Mlldff. : Hidalgo, Obras Malac., pt. i (1890),
 p. 98, No. 127.

HAPPIA, Bourguignat.

(*Ante*, p. 233.)

1. HAPPIA FLORA, Pfeiffer.

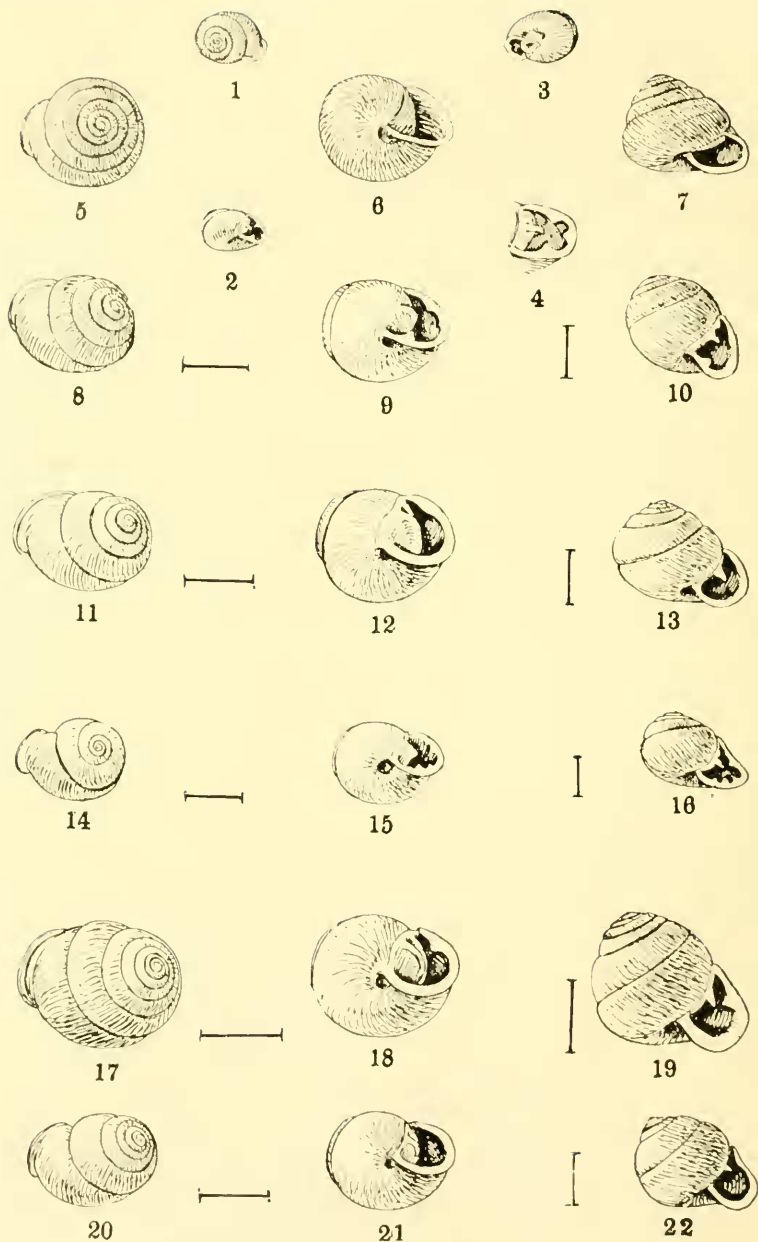
Helix Flora, Pfr. : Hidalgo, Obras Malac., pt. iii (1893), p. 82, No. 24.
Streptaxis (Ammonoceras) Flora, Hidalgo : *ib.*, p. 128.

2. HAPPIA ANDICOLA, Philippi.

Helix Andium, Phil. : Hidalgo, Obras Malac., pt. iii (1893), p. 82,
 No. 23.
Selenites Andium, Hidalgo : *ib.*, p. 128.

5. HAPPIA CUZCANA, Philippi.

Helix Baczensis, Hidalgo : Obras Malac., pt. iii (1893), p. 86, No. 45.
Streptaxis (Ammonoceras) Cuzcanus, Hidalgo : *ib.*, pp. 128 and 136.



J. N. Fitch, F.L.S., del.

NEW AND UNFIGURED STREPTAXIS.

6. *HAPPIA VITRINA*, Wagner.

Helix vitrina, Wagn.: Hidalgo, Obras Malac., pt. iii (1893), p. 84,
No. 34.

Streptaxis (*Ammonoceras*) *vitrina*, Hidalgo: ib., p. 128.

SCOLODONTA, Döring.

(*Ante*, p. 236.)

7. SCOLODONTA TROCHILIONEIDES, Orbigny.

Helix trochilioneides, Orb.: Hidalgo, Obras Malac., pt. iii (1893),
p. 86, No. 42.

Streptaxis (*Ammonoceras*) *trochilioneides*, Hidalgo: ib., pp. 128 and 138.

Hab.—Peru: Lima.

EXPLANATION OF PLATE XII.

FIGS. 1-3.	<i>Streptaxis latior</i> , n.sp.	
„ 4.	„	„ aperture, $\times 2$.
„ 5-7.	„	<i>Da-Costæ</i> , n.sp.
„ 8-10.	„	<i>obtusus</i> , Stol.
„ 11-13.	„	<i>Thebawi</i> , Godw.-Aust.
„ 14-16.	„	<i>pleurostomoides</i> , n.sp.
„ 17-19.	„	<i>Prestoni</i> , n.sp.
„ 20-22.	„	<i>porrectus</i> , Pir.